

CLAIMS

What is claimed is:

1. A stent delivery assembly comprising:
an elongate wire having a proximal end, a distal end, and a length therebetween;
a radially expandable stent positioned coaxially on the wire towards the distal end;
and
a tubular sheath member covering at least a portion of the wire wherein the sheath is retractable from a first position where the stent is covered by the sheath to a second position where the stent is uncovered,
wherein the assembly is adapted for insertion within a catheter body lumen.
2. The assembly of claim 1 further comprising a coil disposed at the distal end of the wire.
3. The assembly of claim 2 wherein the coil is radio-opaque.
4. The assembly of claim 1 wherein the wire comprises a tapered section located proximally of the stent.
5. The assembly of claim 1 wherein the wire comprises a tapered section located distally of the stent.
6. The assembly of claim 1 wherein the wire has a first diameter and at least one section having a second diameter which is smaller than the first diameter and wherein the stent is positioned coaxially about the second diameter.
7. The assembly of claim 1 further comprising at least one radio-opaque marker band located on the wire proximally or distally of the stent.
8. The assembly of claim 1 wherein the radially expandable stent is comprised of a radio-opaque material.

9. The assembly of claim 8 wherein the radio-opaque material comprises platinum.

10. The assembly of claim 1 wherein the radially expandable stent is comprised of a shape memory alloy.

11. The assembly of claim 10 wherein the shape memory alloy comprises Nitinol.

12. The assembly of claim 1 wherein the sheath further comprises a flush port located near a proximal end of the sheath, wherein the flush port is in fluid communication with a distal end of the sheath.

13. The assembly of claim 1 further comprising an inflatable angioplasty balloon section located near the distal end of the wire.

14. The assembly of claim 13 wherein the balloon section is located proximally or distally of the stent.

15. A method of delivering a stent within a hollow body organ comprising:
advancing an elongate wire having a proximal end, a distal end, and a length therebetween through a catheter body lumen to a preselected treatment site within the hollow body organ, wherein at least a portion of the wire is covered by a tubular sheath member;

positioning a radially expandable stent adjacent to the treatment site, wherein the stent is positioned coaxially towards the distal end of the wire; and

retracting the sheath member distally along the wire such that the stent expands radially into contact over the treatment site.

16. The method of claim 15 further comprising positioning a radially expandable balloon section adjacent to the treatment site prior to positioning the radially expandable stent, wherein the balloon section is the located near the distal end of the wire.

17. The method of claim 16 further comprising expanding the balloon section against the treatment site.

18. The method of claim 15 further comprising flushing a fluid between the wire and the tubular sheath member prior to advancing the elongate wire through the catheter body lumen.

19. The method of claim 15 wherein positioning the radially expandable stent adjacent to the treatment site comprises determining the stent location relative to the treatment site via at least one radio-opaque marker located on the wire.

20. The method of claim 15 wherein retracting the sheath member distally comprises moving the sheath member relative to the wire from a first position where the stent is covered by the sheath to a second position where the stent is uncovered.

21. The method of claim 15 further comprising advancing the catheter body through the hollow body organ to the treatment site prior to advancing the elongate wire.

22. The method of claim 15 further comprising withdrawing the wire from the catheter body lumen.